

Application Number 09/709,211
Amendment Accompanying RCE

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Amendments to the Claims:

This following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for analyzing direct marketing subscription information[[.]] comprising:
 - receiving a plurality of direct marketing subscription information, wherein the direct marketing subscription information is not structured hierarchically;
 - archiving [[said]] the plurality of direct marketing subscription information into a repository;
 - retrieving from [[said]] the repository a plurality of selected direct marketing subscription information;
 - transforming [[said]] the plurality of selected direct marketing subscription information into a plurality of transition table format information;
 - populating a facts database with [[said]] the transition table format information to produce at least one of a plurality of facts tables with a summarization of [[said]] the transition table format information, wherein the facts tables are structured hierarchically;
 - denormalizing [[said]] the summarization of [[said]] the transition table format information to produce a plurality of denormalized information, wherein denormalizing comprises propagating information from one table to another, wherein each of the tables is at a different level of a hierarchical structure based on the hierarchy of the facts tables; and
 - providing a report based upon [[said]] the denormalized information, wherein [[said]] the report is provided to a user via a browser application.
2. (currently amended) The method of claim 1[[.]] wherein [[said]] the denormalizing comprises:
 - populating selected information from at least one of a plurality of facts tables to a key table.

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3. (currently amended) The method of claim 2[[],] wherein [[said]] the facts tables are stored in a facts table database.

4. (currently amended) The method of claim 3[[],] wherein [[said]] the key table is stored in a ~~grouping~~ groupings table database.

5. (currently amended) The method of claim 2[[], said]] the at least one of a plurality of facts tables comprising-at-least-one-of comprises a source category table, a source table, a campaign table, ~~or and~~ a panels table, wherein the source category table is at a hierarchical level above the source table, which is at a hierarchical level above the campaign table, which is at a hierarchical level above the panels table.

6. (currently amended) The method of claim 1[[],] further comprising:
receiving input of at least one criteria for at least one of a plurality of reports; and
providing [[said]] the report based upon [[said]] the denormalized information according to [[said]] the at least one criteria.

7. (currently amended) The method of claim 1[[],] further comprising:
receiving input of at least one criteria for at least one of a plurality of tables; and
configuring [[said]] the at least one of [[said]] the plurality of tables based upon [[said]] the at least one criteria.

8. (currently amended) The method of claim 1[[],] further comprising:
receiving input of at least one of a username and a password;
verifying whether [[said]] the input of [[said]] the at least one of a username and a password corresponds to a user authorized to access reporting procedures; and
providing access to reporting procedures to [[said]] the user if [[said]] the user is determined to be authorized.

9. (currently amended) The method of claim 8[[],] further comprising:

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verifying whether ~~[[said]] the~~ input of ~~[[said]] the~~ at least one of a username and a password corresponds to a user authorized to access administrative procedures; and
providing access to administrative procedures to ~~[[said]] the~~ user if ~~[[said]] the~~ user is determined to be authorized.

10. (currently amended) A method for analyzing direct marketing subscription information~~[[,]]~~ comprising:
receiving a plurality of direct marketing subscription information;
archiving ~~[[said]] the~~ plurality of direct marketing subscription information into a repository;
retrieving from ~~[[said]] the~~ repository a plurality of selected direct marketing subscription information;
transforming ~~[[said]] the~~ plurality of selected direct marketing subscription information into transition table format information;
populating a facts database with ~~[[said]] the~~ transition table format information to produce at least one of a plurality of facts tables with a summarization of ~~[[said]] the~~ transition table format information, wherein the facts tables are structured hierarchically;
denormalizing ~~[[said]] the~~ summarization of ~~[[said]] the~~ transition table format information to produce a plurality of denormalized information, ~~[[said]] the~~ denormalizing comprising populating selected information from at least one of a plurality of facts tables, stored in a facts table database, to a key table, stored in a grouping groupings tables database, wherein ~~[[said]] the~~ denormalizing further comprises propagating ~~[[said]] the~~ selected information from one table to another, each of the tables being at a different level of a hierarchical structure based on the hierarchy of the facts tables; and
providing a report based upon ~~[[said]] the~~ denormalized information, wherein ~~[[said]] the~~ report references ~~[[said]] the~~ key table and not ~~[[said]] the~~ at least one of the plurality of facts tables, ~~[[said]] the~~ at least one of the plurality of facts tables includes at least one selected ~~from the group including~~ of a source category table, a source table, a campaign table, ~~[[and]] or~~ a panels table.

11. (currently amended) The method of claim 10~~[[,]]~~ further comprising:

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receiving input of at least one criteria for at least one of a plurality of reports; and
providing [[said]] the report based upon [[said]] the denormalized information according
to [[said]] the at least one criteria.

12. (currently amended) The method of claim 10~~[[,]]~~ further comprising:
receiving input of at least one criteria for at least one of a plurality of tables; and
configuring [[said]] the at least one of [[said]] the plurality of tables based upon [[said]]
the at least one criteria.

13. (currently amended) The method of claim 10~~[[,]]~~ further comprising:
receiving input of at least one of a username and a password;
verifying whether [[said]] the input of [[said]] the at least one of a username and a
password corresponds to a user authorized to access reporting procedures; and
providing access to reporting procedures to [[said]] the user if [[said]] the user is
determined to be authorized.

14. (currently amended) The method of claim 13~~[[,]]~~ further comprising:
verifying whether [[said]] the input of [[said]] the at least one of a username and a
password corresponds to a user authorized to access administrative procedures; and
providing access to administrative procedures to [[said]] the user if [[said]] the user is
determined to be authorized.

15. (previously presented) A computer program product for analyzing direct marketing
subscription information, [[said]] the computer program product comprising:
code that receives a plurality of direct marketing subscription information;
code that archives [[said]] the plurality of direct marketing subscription information into
a repository;
code that retrieves from [[said]] the repository a plurality of selected direct marketing
subscription information;
code that transforms [[said]] the plurality of selected direct marketing subscription
information into transition table format information;

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code that populates a facts database with [[said]] the transition table format information to produce at least one of a plurality of facts tables with a summarization of [[said]] the transition table format information, wherein the facts tables are structured hierarchically;

code that denormalizes [[said]] the summarization of [[said]] the transition table format information to produce a plurality of denormalized information, [[said]] the denormalization comprising populating selected information from at least one of a plurality of facts tables, stored in a facts table database, to a key table, stored in a ~~grouping~~ groupings tables database, wherein [[said]] the denormalization further comprises propagating information from one table to another, each of the tables being at a different level of a hierarchical structure based on the hierarchy of the facts tables;

code that provides a report based upon [[said]] the denormalized information, [[said]] the code that provides [[said]] the report being arranged to reference the key table to provide the report; and

a computer readable storage medium for holding the code codes.

16. (currently amended) The computer program product of claim 15~~[[,]]~~ further comprising:

code that receives input of at least one criteria for at least one of a plurality of reports;
and

code that provides [[said]] the report based upon [[said]] the denormalized information according to [[said]] the at least one criteria.

17. (currently amended) The computer program product of claim 15~~[[,]]~~ further comprising:

code that receives input of at least one criteria for at least one of a plurality of tables; and
code that configures [[said]] the at least one of [[said]] the plurality of tables based upon [[said]] the at least one criteria.

18. (currently amended) The computer program product of claim 15~~[[,]]~~ further comprising:

code that receives input of at least one of a username and a password;

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code that verifies whether ~~[[said]] the~~ input of ~~[[said]] the~~ at least one of a username and a password corresponds to a user authorized to access reporting procedures; and

code that provides access to reporting procedures to ~~[[said]] the~~ user if ~~[[said]] the~~ user is determined to be authorized.

19. (currently amended) The computer program product of claim 18~~[[,]]~~ further comprising:

code that verifies whether ~~[[said]] the~~ input of ~~[[said]] the~~ at least one of a username and a password corresponds to a user authorized to access administrative procedures; and

code that provides access to administrative procedures to ~~[[said]] the~~ user if ~~[[said]] the~~ user is determined to be authorized.

20. (currently amended) An apparatus for analyzing direct marketing subscription information~~[[,]]~~ comprising:

means for receiving a plurality of direct marketing subscription information;

means for archiving ~~[[said]] the~~ plurality of direct marketing subscription information into a repository;

means for retrieving from ~~[[said]] the~~ repository a plurality of selected direct marketing subscription information;

means for transforming ~~[[said]] the~~ plurality of selected direct marketing subscription information into transition table format information;

means for populating a facts database with ~~[[said]] the~~ transition table format information to produce at least one of a plurality of facts tables with a summarization of ~~[[said]] the~~ transition table format information, wherein the facts tables are structured hierarchically;

means for denormalizing ~~[[said]] the~~ summarization of ~~[[said]] the~~ transition format information to produce a plurality of denormalized information, ~~[[said]] the~~ means for denormalizing comprising populating selected information from at least one of a plurality of facts tables, stored in a facts table database, to a key table, stored in a grouping groupings tables database, wherein ~~[[said]] the~~ means for denormalizing further comprises propagating information from one table to another, each of the tables being at a different level of a hierarchical structure based on the hierarchy of the facts tables; and

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means for providing a report based upon [[said]] the denormalized information, [[said]] the report being arranged to reference [[said]] the key table.

21. (currently amended) A system for analyzing direct marketing subscription information[,], comprising:

at least one of a plurality of clients;

a web server connected to [[said]] the at least one of a plurality of clients by a computer network;

an application server; and

a database server; connected to [[said]] the application server and [[said]] the web server by a communication medium, wherein [[said]] the at least one client receives a plurality of direct marketing subscription information and forwards [[said]] the plurality of direct marketing subscription information via [[said]] the web server and [[said]] the application server to [[said]] the database server, which archives [[said]] the plurality of direct marketing subscription information into a repository[;], and wherein

[[said]] the application server retrieves from [[said]] the repository a plurality of selected direct marketing subscription information and transforms [[said]] the plurality of selected direct marketing subscription information into transition table format information, ~~and wherein~~

[[said]] the database server populates a facts database with [[said]] the transition table format information to produce at least one of a plurality of facts tables with a summarization of [[said]] the transition table format information, wherein the facts tables are structured hierarchically, ~~and wherein~~

[[said]] the application server denormalizes [[said]] the summarization of [[said]] the transition format information to produce a plurality of denormalized information, [[said]] the denormalization comprising populating selected information from at least one of a plurality of facts tables, stored in a facts table database, to a key table, stored in a ~~grouping~~ groupings tables database and propagating information from one table to another, each of the tables being at a different level of a hierarchical structure based on the hierarchy of the facts tables, ~~and~~ ~~and wherein~~

[[said]] the application server provides a report based upon [[said]] the denormalized information, [[said]] the report being arranged to reference [[said]] the key table.

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22. (currently amended) The system of claim 21[[,]] wherein [[said]] the at least one of a plurality of clients receives input of at least one criteria for at least one of a plurality of reports; and forwards [[said]] the input via [[said]] the web server to [[said]] the application server, which provides [[said]] the report based upon [[said]] the denormalized information according to [[said]] the at least one criteria.

23. (currently amended) The system of claim 21[[,]] wherein [[said]] the at least one of a plurality of clients receives input of at least one criteria for at least one of a plurality of tables; and forwards [[said]] the input via [[said]] the web server to [[said]] the application server, which configures [[said]] the at least one of [[said]] the plurality of tables based upon [[said]] the at least one criteria.

24. (currently amended) The system of claim 21[[,]] wherein [[said]] the at least one of a plurality of clients receives input of at least one of a username and a password; and forwards [[said]] the input via [[said]] the web server to [[said]] the application server, which verifies whether [[said]] the input of [[said]] the at least one of a username and a password corresponds to a user authorized to access reporting procedures; and provides access to reporting procedures to [[said]] the user if [[said]] the user is determined to be authorized.

25. (currently amended) The system of claim 24[[,]] wherein [[said]] the application server verifies whether [[said]] the input of [[said]] the at least one of a username and a password corresponds to a user authorized to access administrative procedures; and provides access to administrative procedures to [[said]] the user if [[said]] the user is determined to be authorized.

26. (currently amended) The method of claim 1 further comprising:
receiving additional direct marketing subscription information;
archiving [[said]] the additional direct marketing subscription information in [[said]] the repository;
retrieving from [[said]] the repository selected additional direct marketing subscription information;

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transforming ~~[[said]]~~ the selected additional direct marketing subscription information into a transition table format associated with ~~[[said]]~~ the transition table format information; and
appending ~~[[said]]~~ the facts database with ~~[[said]]~~ the additional direct marketing subscription information in ~~[[said]]~~ the transition table format.

27. (currently amended) The method of claim 10~~[[,]]~~ wherein the key table is the only table in the facts database used in generating the report.

28. (currently amended) A method of analyzing direct marketing subscription information comprising:

providing a plurality of direct marketing subscription information, wherein the direct marketing subscription information is not structured hierarchically;

transforming a subset of the plurality of direct marketing subscription information into a plurality of transition tables~~[[,]]~~, structured hierarchically, comprising:

using a first set of stored procedures, generating a first lookup table for a lookup database, wherein the first lookup table comprises a first level of a hierarchical structure;

using a second set of stored procedures, generating a second lookup table for a lookup database by propagating at least a portion of information from the first lookup table to the second lookup table, wherein the second lookup table comprises a second level of the hierarchical structure, below the first level; and

using a third set of stored procedures, generating a key table by denormalizing the first and second lookup tables in the facts database, wherein the key table comprises the first and second levels of the hierarchical structure; and

generating a first report by using the key table, without referring to the first or second lookup tables, whereby generating the first report without referring to the first or second lookup tables reduces disk access, thereby improving performance.

29. (previously presented) The method of claim 28 wherein the first lookup table is a source table, and the second lookup table is a campaign table.

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30. (previously presented) The method of claim 29 wherein information in a product identification field, source category name field, and source name field are propagated from the source table to the campaign table.

31. (previously presented) The method of claim 28 further comprising:
forming a third lookup table by propagating at least a portion of information from the second lookup table to the third lookup table, wherein the lookup database also comprises the third lookup tables, and the generating the key table further comprises denormalizing the third lookup table.

32. (previously presented) The method of claim 28 wherein when generating the first report, the first and second lookup tables are not used.

33. (currently amended) The method of claim 28 further comprising:
receiving a request to generate a second report after generating the first report, wherein the second report will be different from the first report; and
generating the second report by using the key table, without referring to the first or second lookup tables, whereby generating the second report without referring to the first or second lookup tables reduces disk access, thereby improving performance.

34. (previously presented) The method of claim 33 wherein the second report comprises at least one hyperlink to the first report.

35. (currently amended) The method of claim 28 further comprising:
providing a web browser interface through which a plurality of reports may be requested;
and
when receiving a report request through the web browser interface, generating a report by using the key table, where the key table has not been regenerated between report requests.

36. (currently amended) The method of claim 1 wherein when propagating information from one table to another table, the table from which information is being propagated is at a

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higher level in the hierarchical structure than the table to which information is being propagated to 28 wherein the forming a second lookup table by propagating at least a portion of information from the first lookup table to the second lookup table is accomplished without using a database table join operation.

37. (currently amended) The method of claim 10 wherein when propagating information from one table to another table, the table from which information is being propagated is at a higher level in the hierarchical structure than the table to which information is being propagated to 31 wherein the first lookup table is a source table, the second lookup table is a campaign table, the third lookup table is a panel table, and the second and third lookup tables are formed without using database table join operations.

38. (previously presented) The method of claim 28 further comprising:
updating the key table via an on-line administrative interface from a browser program
executing on a client device.

39. (currently amended) The method of claim 28 further comprising:
revising the first lookup table; and
regenerating the key table using the revised first lookup table, ~~without forming the second lookup table using the revised first lookup table~~ without regenerating the second lookup table using the revised first lookup table.

40. (currently amended) The method of claim 28 further comprising:
saving the first report in a saved reports table; and
upon receiving a second report request from a client device, generating a second report using the key table, wherein the second report comprises at least one hyperlink to the first report in the saved reports table.

41. (currently amended) The method of claim 28 wherein
saving the first report in a saved reports table; and

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upon receiving a second report request from a client device, generating a second report using the key table, wherein the second report comprises a plurality of hyperlinks, wherein at least one hyperlink is to the first report and at least one hyperlink will cause generating a third report using the key table.

42. (currently amended) A method of analyzing direct marketing subscription information comprising:

providing a plurality of direct marketing subscription information;

transforming a subset of the plurality of direct marketing subscription information into a plurality of transition tables;

using the plurality of transition tables, generating a first lookup table, wherein the first lookup table comprises a first level of a hierarchy of the transition tables;

creating a second lookup table by propagating at least a portion of information from the first lookup table to the second lookup table, wherein the second lookup table comprises a second level of the hierarchy of the transition tables, which is below the first level of the hierarchy;

creating a third lookup table by propagating at least a portion of information from the second lookup table to the third lookup table, wherein the third lookup table comprises a third level of the hierarchy of the transition tables, which is below the second level of the hierarchy;

creating a fourth lookup table by propagating at least a portion of information from the third lookup table to the fourth facts table, wherein the fourth lookup table comprises a fourth level of the hierarchy of the transition tables, which is below the third level of the hierarchy;

generating a key table by denormalizing the first, second, third, and fourth lookup tables;
and

upon receiving a first report request from a client device, generating a first report using the key table without using to the first, second, third, and fourth lookup tables.

43. (previously presented) The method of claim 42 wherein a lookup tables database comprises the first, second, third, and fourth lookup tables.

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44. (previously presented) The method of claim 42 wherein a first stored procedure is used to create the second facts table.

45. (previously presented) The method of claim 42 wherein contents of the second, third, and fourth facts tables are user customizable.

46. (previously presented) The method of claim 42 further comprising:
displaying the first report on the client device.

47. (currently amended) The method of claim 42 further comprising:
saving the first report in a saved reports table; and
upon receiving a second report request from a client device, generating a second report using the key table, wherein the second report comprises at least one hyperlink to the first report in the saved reports table.

48. (currently amended) The method of claim 42 wherein
saving the first report in a saved reports table; and
upon receiving a second report request from a client device, generating a second report using the key table, wherein the second report comprises a plurality of hyperlinks, wherein at least one hyperlink is to the first report and at least one hyperlink will cause generating a third report using the key table.